IN THE CLAIMS:

1. (original) A paper- or a cardboard-based security product which comprises

- a paper or a cardboard product which is equipped with a security symbol which can be detected,

characterized in that

- the security symbol comprises a layer in the product, which layer consists of a synthetic, electrically conductive polymer, the electrical conductivity of which has been locally changed to form a figure that is electrically conductive or, alternatively, electrically non-conductive, and
- the surface of the paper or the cardboard product is provided with a figure which indicates the presence of the security symbol.

2. (original) A product according to claim 1, characterized in that the security symbol comprises a layer that is formed by an electrically conductive polymer that is fitted below the surface layer of the paper or the cardboard product.

3. (currently amended) A product according to ~~claim 1 or 2~~

claim 1, characterized in that the electrically conductive polymer comprises an independently electrically conductive polymer that can be doped in order to generate charge carriers.

4. (original) A product according to claim 3, characterized in that the layer containing an electrically conductive polymer is rendered locally non-conductive by dedoping the polymer with an alkali solution or, alternatively, locally conductive by doping the polymer with an acid solution containing a doping agent.

5. (currently amended) A product according to ~~any of the preceding claims~~ claim 1, characterized in that the security symbol comprises a bar code.

6. (currently amended) A product according to ~~any of the preceding claims~~ claim 1, characterized in that the layer comprising an electrically conductive polymer is identifiable on the basis of its electrical conductivity or the colour of the layer or a combination of these.

7. (original) A product according to claim 6, characterized in that it becomes evident from the figure on the surface of the paper

or the cardboard surface how the electrical conductivity of the security symbol can be established.

8. (original) A product according to claim 7, characterized in that by using a figure on the surface of the paper or the cardboard product at least two points have been marked on the surface in such a manner that the electrical conductivity between these two points forms the security symbol of the product.

9. (currently amended) A product according to ~~claim 7 or 8~~ claim 7, characterized in that the figure comprises text or a graphic symbol.

10. (currently amended) A product according to ~~any of the claims 7 - 9~~ claim 1, characterized in that the figure, besides indicating the security symbol, also provides the product description or the directions for use of the paper or the cardboard product or a product included in it.

11. (currently amended) A product according to ~~any of the claims 1 - 10~~ claim 1, characterized in that the electrically conductive polymer is polyaniline, polypyrrolidine or polytiophene.

12. (original) A method of manufacturing a paper- or a cardboard-based security product, according to which method

- a paper or a cardboard product is provided with a security symbol which can be detected,

characterized in that

- a layer comprising an electrically conductive polymer is fitted in the product,
- the electrical conductivity of the electrically conductive polymer in the layer is locally changed to form an electrically conductive or, alternatively, electrically non-conductive figure, and
- the paper or the cardboard surface is equipped with a visual mark which indicates the presence of a layer that comprises an electrically conductive polymer.

13. (original) A method according to claim 12, characterized in that the electrical conductivity of the polymer is changed by doping the electrically non-conductive polymer or, alternatively, by dedoping the electrically conductive polymer.

14. (original) A method according to claim 13, characterized in that the electrically non-conductive polymer is doped by

treating the polymer layer with an acid solution, which is used to paint a desired figure on the surface of the paper or the cardboard.

15. (original) A method according to claim 13, characterized in that the electrically conductive polymer is dedoped by treating the polymer layer with an alkali solution, which is used to paint a desired figure on the surface of the paper or the cardboard.

16. (currently amended) A method according to ~~any of the claims 13-15~~ claim 13, characterized in that the electrically conductive polymer is doped by printing a desired figure on the surface of the paper or the cardboard using printing ink which is capable either of doping or dedoping the electrically conductive polymer.

17. (currently amended) A method according to ~~any of the claims 12-16~~ claim 12, characterized in that the security symbol comprises a layer fitted below the surface layer of the paper or the cardboard product, said layer being formed by the electrically conductive polymer, in which case, in order to dope or, alternatively, dedope the polymer, an acid or, alternatively, an

alkali solution is absorbed through the surface layer of the paper or the cardboard product.

18. (currently amended) A method according to ~~any of the claims 12-17~~ claim 12, characterized in that a figure, from which it becomes evident how the electrical conductivity of the security symbol can be established, is printed on the paper or the cardboard surface.

19. (original) A method according to claim 17, characterized in that on the surface of the paper or the cardboard product a figure is printed in which at least two points have been marked, such that the electrical conductivity between these two points forms the security symbol of the product.

20. (original) A method of confirming the authenticity of a security product, according to which method

- a paper or a cardboard product provided with a security symbol, which can be detected, is used as a security product,

characterized in that

- a layer comprising a synthetic, electrically conductive

polymer, the electrical conductivity of which has been locally changed to form an electrically conductive or, alternatively, non-conductive figure, is formed in the product, and

- the authenticity of the security product is confirmed by identifying the electrical conductivity of the paper or the cardboard product at the location of the security symbol.

21. (original) A method according to claim 20, characterized in that a figure indicating the presence of a security symbol is fitted onto the surface of the paper or the cardboard product, said figure showing how to establish the electrical conductivity of the security symbol.

22. (currently amended) A method according to ~~claim 20 or 21~~ claim 20, characterized in that the electrically conductive polymer is doped by printing a figure on the surface of the paper or the cardboard surface, using printing ink which is capable of doping or dedoping the electrically conductive polymer.

23. (currently amended) A method according to ~~any of the~~

~~claims 20-22~~ claim 20, characterized in that the authenticity of a paper or a cardboard product is confirmed by treating a security symbol with a doping or dedoping agent and by observing a change in the electrical conductivity of the security symbol.